PATENT ABSTRACTS OF JAPAN
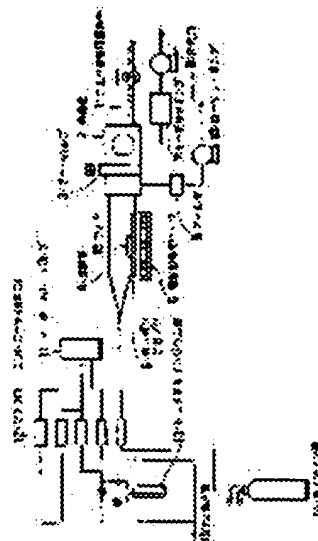
(54) CRYSTAL GROWTH METHOD OF COMPOUND SEMICONDUCTOR

(57)Abstract:

PURPOSE: To prevent the adverse influence on the growth speed, composition and uniformity of a crystal film, and control the film thickness in atomic layer order even when there occurs a change in the concentration of a material gas in vapor phase, by heating a substrate at a specified temperature and supplying alternately trimethyl indium and compound containing group V elements to the surface.

CONSTITUTION: A substrate 16 is heated so as to keep a temperature wherein trimethyl indium as original material of In is not thermally decomposed to turn into In atom in a vapor phase. By supplying alternately trimethyl indium and compound containing group V elements like phosphorus and arsenic to the surface, compound semiconductor crystal containing In is grown. For example, the wafer 16 is placed on a recessed part formed in a susceptor 5 made of carbon; the susceptor is subjected to radiation heating by a heater 6, from the rear; the wafer 16 is heated at 300-400° C; the temperature of the vapor phase in the vicinity of the wafer is kept low, thereby preventing the generation of In atom. In(CH3)3 and PH3 are alternately supplied on the wafer 16.

LEGAL STATUS

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